

# TUFF-DOR3.1 & 4.1

# Installation Manual

## INSTALLATION INSTRUCTIONS FOR TUFF-DOR 3.1 AND TUFF-DOR 4.1 DOORS

When installing security rated doors, the client must be fully satisfied that the structure around the aperture is more secure or equivalent to the doorset rating.

TUFF-DOR 3.1, TUFF-DOR 4.1 doorsets are LPCB certified to LPS 1175 SR3 and SR4, respectively. To ensure that the installation complies with the accreditation, follow one of the minimum fixing standards below.

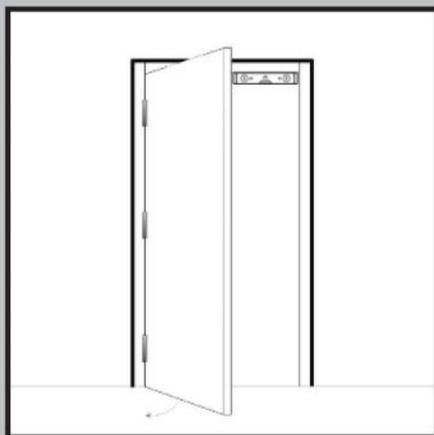
The minimum fixing standards (below) assume installation direct into substrate not via intermediate substrate, such as plasterboard. The perimeter of the door should be made good, using mastic or similar.

### Fixing Options Security Rated Doors

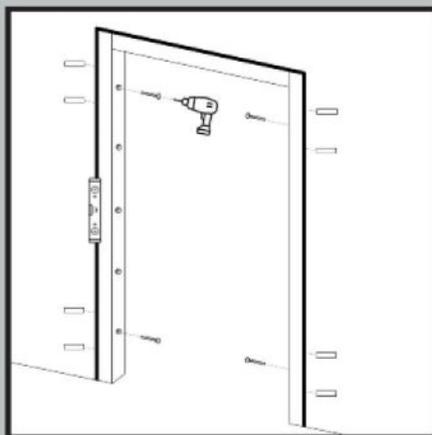
Door Type	Substrate						
	Brick, Block & Concrete			Steel			
Door Type	Min Qty	Size, Grade & Min Bolt Diameter	Min Length	Min Qty	Size & Grade	Min Length	Min Steel Thickness
Tuff-Dor 3.1 (SR3)	20	M8 Grade 8.8	60-150mm	20	M8 Grade 8.8	50-60mm	3mm
	20	M8 Grade A2-70	60-150mm	20	M8 Grade A2-70	50-60mm	3mm
	20	M8 Grade 10.9	60-150mm	20	M8 Grade 10.9	50-60mm	3mm
	24	Hilti HDR C10-80	60-150mm	24	Hilti HDR C10-80	50-60mm	3mm
	8	M10 Grade 10.9	60-150mm	8	M10 Grade 10.9	50-60mm	3mm
	8	M10 Grade 12.9	60-150mm	8	M10 Grade 12.9	50-60mm	3mm
	8	M10 Grade A2-70	60-150mm	8	M10 Grade A2-70	50-60mm	3mm
Tuff-Dor 4.1 (SR4)	16	M10 Grade 10.9	60-150mm	16	M10 Grade 10.9	30mm	5mm
	16	M10 Grade 12.9	60-150mm	16	M10 Grade 12.9	30mm	5mm
	16	M10 Grade A2-70	60-150mm	16	M10 Grade A2-70	30mm	5mm
	16	M12 Grade 10.9	60-150mm	16	M12 Grade 10.9	30mm	5mm
	16	M12 Grade 12.9	60-150mm	16	M12 Grade 12.9	30mm	5mm
	16	M12 Grade A2-70	60-150mm	16	M12 Grade A2-70	30mm	5mm

## SINGLE DOORS

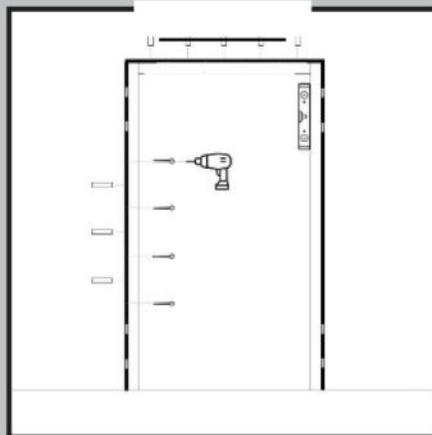
1. Insert the door and frame into the opening, and open the door to 90°.
2. Place the spirit level parallel to the frame. If the head of the frame is not level, use packers to raise the lowest side of the frame to level.
3. Once the frame is aligned, fill the gaps between the frame and the structure with packers to centralise the door and even out the gaps around the frame.
4. Level up the front face of the hinge post, ensuring the top of the frame does not lean in or out of the opening.
5. Drill and insert fixings into top and bottom fixing holes, and place packers close to the fixings. Do not tighten the fixings.
6. Position frame centrally in opening, with hinge post vertical. Double check the door alignment with a spirit level, then tighten fixings.
7. Drill the rest of the holes on each post and insert middle fixings. Do not tighten the fixings.
8. Place packers between the frame and the wall, adjacent to fixings, then tighten fixings.
9. Use the same method to secure the top sill in position.
10. Close door leaf to test it in the frame. If the leading edge is too high, add packing towards the top edge of the hinge post. If it's too low, then reduce packing towards the top edge.
11. Once adjustments are made, drill and insert fixings into lock post. Do not tighten the fixings.
12. Insert packers between the frame and wall fixing, then tighten fixings. Do not over pack between the frame and the wall.
13. Test the door hardware and operation. Any panic hardware must have the opening force measured and recorded in the operation and maintenance manual.
14. Fit the bottom sill (if present). Level up with shims so it is parallel with the bottom of the door leaf, then drill and fit to floor.
15. Mastic seal around the door frame and bottom sill (inside and outside), as required.
16. Plug the fixing holes in the frame with bungs.
17. Re-check operation of the doorset.



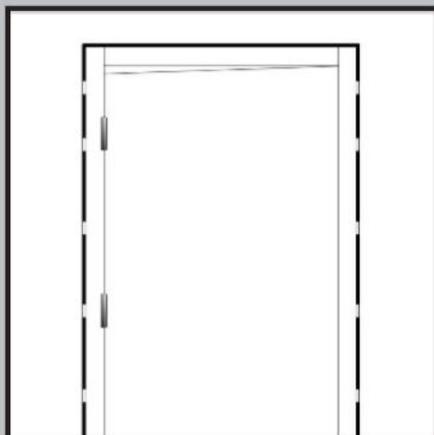
Steps 1-4



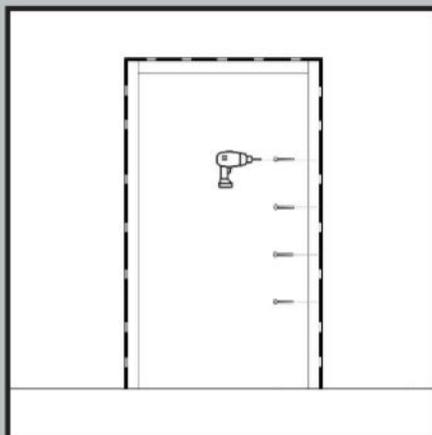
Steps 5-6



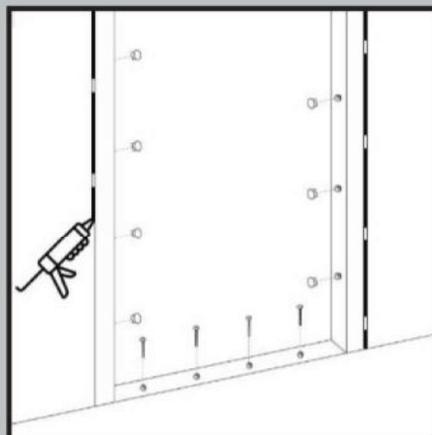
Steps 7-9



Step 10



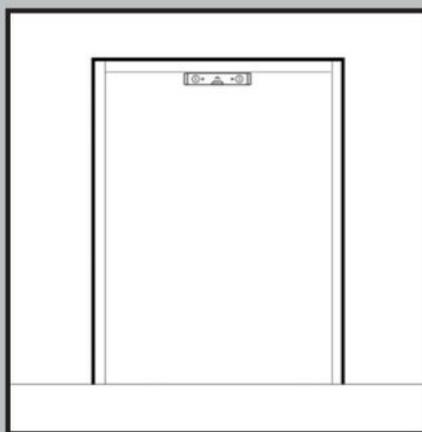
Steps 11-13



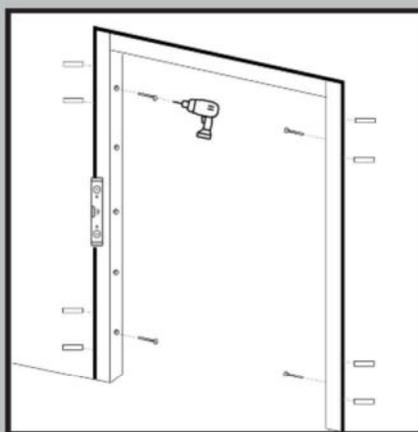
Steps 14-17

## DOUBLE DOORS

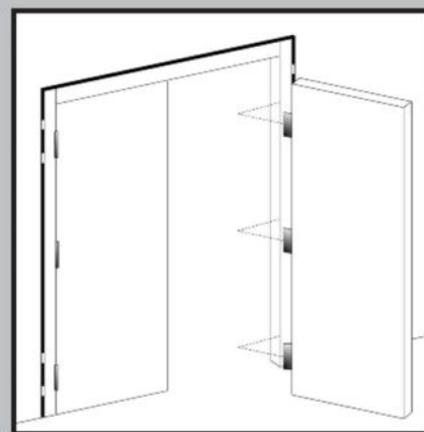
1. Assemble the door frame using fixing blocks and screws, then insert the frame into the opening.
2. Place the spirit level parallel to the frame. If the head of the frame is not level, use packers to raise the lowest side of the frame to level.
3. Once the frame is aligned, fill the gaps between the frame and the structure with packers to centralise the door and even out the gaps around the frame.
4. Level up the front face of the first hinge post, so the frame does not lean in or out of the opening.
5. Drill and insert fixings into top and bottom fixing holes. If the doors are heavy, add one or two fixings to the middle of each post as well. Place packers close to the fixings. Do not tighten the fixings.
6. Position frame centrally in opening, with the first hinge post vertical. Double check the door alignment with a spirit level, then tighten fixings.
7. Hang the doors on the frame, then close the doors to check that they shut correctly and are hanging level, and test the door hardware.
8. If the doors bind at the top, remove some of the packing from both sides at the top of the frame and tighten the fixings. If the doors are binding at the bottom, remove some of the packing from the bottom.
9. Once the doors are positioned and working satisfactorily, drill the rest of the holes on the hinge posts and insert fixings. Do not tighten the fixings.
10. Place packers between the frame and the wall, adjacent to each of the fixings, then tighten fixings. Do not over pack between the frame and the wall.
11. Use the same method to secure the top sill in position.
12. Test the door hardware and operation. Any panic hardware must have the opening force measured and recorded in the operation and maintenance manual.
13. Fit the bottom sill (if present). Level up with shims so it is parallel with the bottom of the door leaf, then drill and fit to floor.
14. Mastic seal around the door frame and bottom sill (inside and outside), as required.
15. Plug the fixing holes in the frame with bungs.
16. Re-check operation of the doorset.



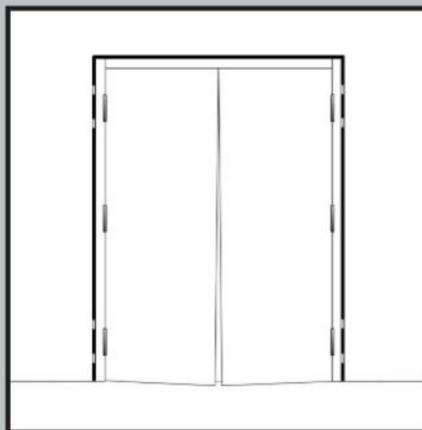
Steps 1-4



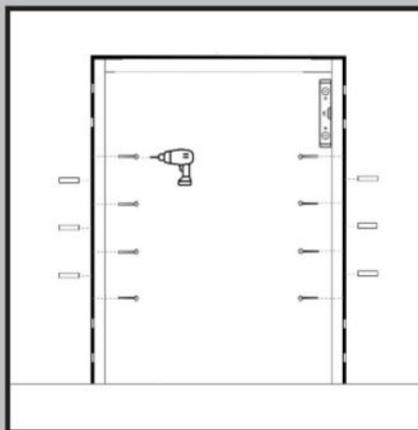
Steps 5-6



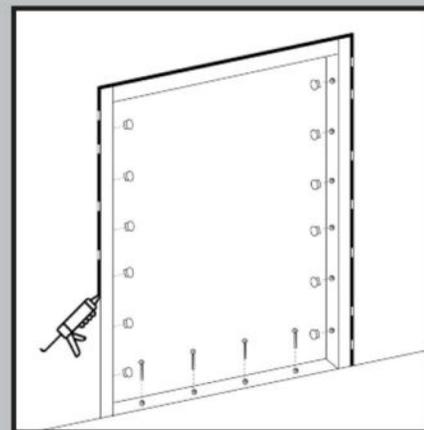
Step 7



Step 8



Steps 9-11



Steps 12-16